



GOV. MSG. NO. **1353**

July 12, 2011

The Honorable Shan Tsutsui, President
and Members of the Senate
Twenty-Sixth State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Calvin Say, Speaker
and Members of the House
Twenty-Sixth State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Tsutsui, Speaker Say and Members of the Legislature:

I am transmitting herewith SB1493 SD1 HD3 CD1, without my approval, and with the statement of objections relating to the measure.

SB1493 SD1 HD3 CD1

RELATING TO LIGHT POLLUTION

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NEIL ABERCROMBIE
Governor, State of Hawaii

EXECUTIVE CHAMBERS

HONOLULU

July 12, 2011

STATEMENT OF OBJECTIONS TO SENATE BILL NO. 1493

Honorable Members
Twenty-Sixth Legislature
State of Hawaii

Pursuant to Section 16 of Article III of the Constitution of the State of Hawaii, I am returning herewith, without my approval, Senate Bill No. 1493, entitled "A Bill for an Act Relating to Light Pollution."

This bill requires every new and replacement outdoor light fixture to be fully shielded beginning July 1, 2013, with certain exceptions.

I support the intent of this bill and its goals of reducing light pollution, protecting endangered species, conserving energy, and reducing the sky glow that impacts astronomy and the ability to see the night sky. However, since the bill passed, new information has become available about the cost and timing of implementation; this bill does not provide funding for the significant initial and continuing expenses that would be required to implement this legislation and does not provide a feasible implementation plan. The law as written is prohibitive.

However, this is a worthy issue and needs to be pursued. A temporary advisory committee was established by Act 161, Session Laws of Hawaii 2009 to develop a starlight reserve strategy to preserve the quality of the night sky. I will work with this committee to develop legislation for the 2012 legislative session which achieves the objectives of Senate Bill 1493 and includes a financing plan.

A BILL FOR AN ACT

RELATING TO LIGHT POLLUTION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that the night sky is a
2 tremendously valuable natural and cultural resource for the
3 residents of Hawaii, and for visitors to Hawaii. The dark night
4 sky has tremendous scientific value for astronomy, and is
5 vitally important for endangered species in Hawaii including
6 birds and turtles. Mauna Kea, on the island of Hawaii, is the
7 best astronomical observatory site in the northern hemisphere,
8 and arguably the best site on Earth. Haleakala on the island of
9 Maui is also a world-class astronomical observatory site.

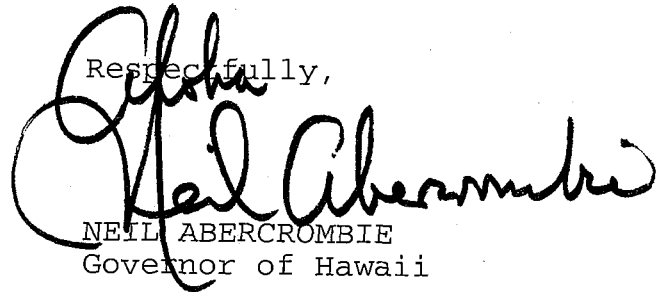
10 Unnecessary light pollution is threatening the dark night
11 sky over the Hawaiian islands. This light pollution includes
12 sky glow, energy waste, glare, light trespass, visual confusion,
13 and environmental harm. Light can travel enormous distances
14 through the Earth's atmosphere, and therefore does not respect
15 county boundaries. Light pollution spreads across the entire
16 State and must be addressed using statewide legislation.
17 Furthermore, endangered species that are affected by light at
18 night live on many of the Hawaiian islands.



STATEMENT OF OBJECTIONS
SENATE BILL NO.
Page 2

For the foregoing reasons, I am returning Senate Bill
No. 1493 without my approval.

Respectfully,

A handwritten signature in black ink, appearing to read "Neil Abercrombie". The signature is stylized with large, flowing loops and is positioned over the printed name and title.

NEIL ABERCROMBIE
Governor of Hawaii

1 Many of the problems with light pollution that Hawaii faces
2 are caused by improperly shielded lights. Poorly shielded
3 lights direct energy straight into the atmosphere, where it is
4 wasted. This light produces sky glow, which limits residents'
5 ability to see stars. For example, in Honolulu only about the
6 brightest twenty stars are visible, whereas about two thousand
7 stars can be seen from a dark location. Poorly shielded lights
8 also cause glare, which diminishes a person's ability to see at
9 night. Poorly shielded lights also enter locations where the
10 light is unwanted (light trespass), including bedrooms, making
11 it difficult for residents to sleep. Excessive light in the
12 sleeping environment has recently been linked to an increased
13 incidence of breast cancer. Improperly shielded lights on the
14 island of Kauai have led to many bird deaths, particularly of
15 the endangered Newell's shearwater.

16 Act 161, Session Laws of Hawaii 2009, formed a temporary
17 advisory committee to assist the department of business,
18 economic development, and tourism to develop a statewide
19 starlight reserve strategy to preserve the quality of the night
20 sky and its associated cultural, scientific, astronomical,
21 natural, and landscape-related values. The temporary advisory
22 committee recommended the enactment of certain measures in the



1 2011 regular session to conserve energy and promote responsible
2 use of light.

3 The purpose of this Act is to implement the recommended
4 legislation of the temporary advisory committee established
5 pursuant to Act 161. It is not the intent of this Act to
6 require the realignment or relocation of any existing light
7 poles.

8 SECTION 2. Chapter 201, Hawaii Revised Statutes, is
9 amended by adding a new section to be appropriately designated
10 and to read as follows:

11 "\$201- Starlight reserve strategy. (a) Beginning
12 July 1, 2013, every new and replacement outdoor light fixture
13 shall be fully shielded; provided that artificial light on
14 shoreline and ocean waters shall be subject to section 205A-71.

15 A light fixture is considered fully shielded when the light
16 fixture is:

17 (1) Constructed so that no light is emitted above the
18 horizontal plane; and

19 (2) Installed in a manner that does not allow light to be
20 directed above the horizontal plane.

21 (b) Lighting for outdoor athletic fields, courts, or
22 tracks shall be fully shielded unless a registered electrical



1 engineer certifies that fully shielded lighting is impractical.

2 Where fully shielded fixtures are not used, acceptable

3 luminaries shall include those that are:

4 (1) Equipped with internal, external, or internal and
5 external glare control louvers and are installed so as
6 to limit direct up-light to less than five per cent of
7 the total lumens exiting from the installed fixtures
8 and minimize offsite light trespass; and

9 (2) Installed and maintained with minimum aiming angles of
10 twenty-five degrees downward from the horizontal;
11 provided that the aiming angle shall be measured from
12 the axis of the luminaire maximum beam candlepower as
13 certified by an independent testing agency.

14 (c) Replacement lighting for roadways and highways shall
15 be fully shielded unless a registered electrical engineer
16 certifies that fully shielded lighting with the existing pole
17 spacing cannot achieve the lighting uniformity levels
18 recommended by the Illuminating Engineering Society of North
19 America. Where fully shielded fixtures are not used, acceptable
20 luminaires shall be partially shielded lights that emit no more
21 than five per cent of their light above the horizontal plane.



(d) The following lighting shall be exempt from this section:

- (1) Light sources of three thousand lumens or less;
- (2) Emergency lighting used by police, firefighters, correctional personnel, or medical personnel for the duration of the emergency;
- (3) Temporary outdoor lighting used for construction or major renovation of buildings or for highway improvements or construction;
- (4) Temporary outdoor lighting used for night-time film production;
- (5) Temporary outdoor lighting used for night-time agricultural operations; and
- (6) Navigational lights that are required for waterways and aircraft.

(e) This section shall be considered to be supplemental to any county lighting ordinance and shall not be construed to supersede or modify county lighting ordinances or rules; provided that the ordinance is not less restrictive than this section."



S.B. NO. 1493
S.D. 1
H.D. 3
C.D. 1

1 SECTION 3. This Act does not affect rights and duties that
2 matured, penalties that were incurred, and proceedings that were
3 begun before its effective date.

4 SECTION 4. New statutory material is underscored.

5 SECTION 5. This Act shall take effect on July 1, 2011.

APPROVED this 12 day of JUL , 2011

GOVERNOR OF THE STATE OF HAWAII